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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/848,432 | 05/04/2001 | Kazuyasu Tanaka | FQ-IP21201 | 7816 |

21254 7590 09/29/2004

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EXAMINER

LIN, KELVIN Y

ART UNIT PAPER NUMBER

2142

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-----------------------------------------|--|
| Office Action Summary | Application No. 09/848,432 | Applicant(s) TANAKA, KAZUYASU | |
| | Examiner Kelvin Lin | Art Unit 2142 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/04/01</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-34 are rejected under 35 USC 102(e) as being anticipated by Treadaway et al., (U.S. Patent 6480477).
3. Regarding claim 1, Treadaway teaches a media converter for converting from one type of media to another, comprising:
 - a first physical-layer interface to a first transmission medium (Treadaway, col. 3, l.50-51);
 - a second physical-layer interface to a second transmission medium (Treadaway, col. 3, l.65-66);
 - a memory connected between the first and second physical-layer interfaces, for temporarily storing data to be transferred between the first and second physical-layer interfaces (Treadaway, col. 3, l.53-55);
 - a determiner for determining whether a received block of data stored in the memory includes predetermined data at a predetermined position of the received block of data (Treadaway, col.21, l.14-24); and

- a controller controlling such that, when it is determined that the received block of data stored in the memory includes the predetermined data (Treadaway, col. 21, l.14-24),
 - a response block of data corresponding to the received block of data is sent from a corresponding one of the first and second physical-layer interfaces back to a source that has transmitted the received block of data (Treadaway, col. 16, l.52-58).
4. Regarding claim 2, Treadaway further discloses the media converter according to claim 1, wherein each of the received and response blocks of data is an Ethernet packet having a predetermined format (Treadaway, col. 13, l.53-59).
 5. Regarding claim 3, Treadaway further discloses the media converter according to claim 2, wherein the predetermined data is stored in a source address field of the received block of data (Treadaway, col.9, l.60-65).
 6. Regarding claim 4, Treadaway further discloses the media converter according to claim 1, wherein the predetermined data is an identification number uniquely assigned to the media converter (Treadaway, col.10, l.5-12).
 7. Regarding claim 5, Treadaway further discloses the media converter according to claim 2, wherein the predetermined data is an identification number uniquely assigned to the media converter (Treadaway, col.28, l.11-13).
 8. Regarding claim 6, Treadaway further discloses the media converter according to claim 1, wherein each of the first and second physical-layer interfaces supports MII (Media Independent Interface) conforming to IEEE802.3 standards (Treadaway, col. 11, l.15-17).
 9. Regarding claim 7, Treadaway further discloses the media converter according to

claim 6, wherein when it is determined that the received block of data stored in the memory includes the predetermined data, the controller accesses another one of the first and second physical-layer interfaces to acquire link information from the other physical-layer interface and generates the response block of data corresponding to the link information (Treadaway, col. 17, l.28-35).

10. Regarding claim 8, Treadaway further discloses the media converter according to claim 6, wherein the controller has a missing link function such that, when one of the first and second physical-layer interfaces comes into link disconnection, the other one of the first and second physical-layer interfaces also comes into link disconnection (Treadaway, col.7, l.33-35).
11. Regarding claim 9, Treadaway further discloses the media converter according to claim 8, wherein, when it is determined that the received block of data stored in the memory includes the predetermined data under missing link state, the controller disables the missing link state to transmit the response block of data back to the source (Treadaway, col.8, l.34-36, col.28, l.41-42).
12. Regarding claim 10, Treadaway further discloses the media converter according to claim 8, wherein, when it is determined that the received block of data stored in the memory does not include the predetermined data under missing link state, the controller switches its operation mode from the missing link state to a normal mode to transfer the received block of data to the other one of the first and second physical-layer interfaces (Treadaway, col. 12, l.55-64).
13. Claims 11-14 have similar limitation as claim 1,4,6, and 7. Therefore, claims 11-

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14 are rejected under Treadaway for the same reason set forth in the rejection of claims 1,4,6, and 7.

14. Claims 15-18 have similar limitation as claim 1,2, 4, 8, and 9. Therefore, claims 15-18 are rejected under Treadaway for the same reason set forth in the rejection of claims 1,2, 4, 8, and 9.

15. Regarding claim 19, Treadaway further discloses a method for detecting a failure on a link including a plurality of media converters, each of which converts from one type of media to another, comprising the steps of:

- a) transmitting a block of data to each of the media converters, the block of data having identification data of the media converter written in a predetermined position of the block of data (Treadaway, col.8, l.34-36, col. 27, l.28-30, col.28, l.41-42);
- b) determining whether a response block of data is received from a corresponding media converter within a predetermined time period (Treadaway, col.23, l.4-5); and
- c) determining a location of a failure based on a determination result of the step (b) (Treadaway, col.27, l.57-64).

16. Regarding claim 20, Treadaway further discloses the method according to claim 19, wherein, in the step (c), when a response block of data is not received from a corresponding media converter within a predetermined time period, it is determined that a failure occurs at a location beyond the corresponding media converter (Treadaway, col.23, l.18-20).

17. Claims 21-25 have similar limitation as claim 1,6-7, and 9-10. Therefore, claims 21-25 are rejected under Treadaway for the same reason set forth in the rejection of claims 1, 6-7, and 9-10.

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18. Regarding claim 26, Treadaway further discloses a system for detecting a failure on a link including a plurality of media converters, each of which converts from one type of media to another, comprising:

- a test manager connected to one of the media converters, wherein each of the media converters comprises (Treadaway, col.7, l.33-35);
- a first physical-layer interface to a first transmission medium (Treadaway, col.3, l.50-51);
- a second physical-layer interface to a second transmission medium (Treadaway, col.3, l.65-66);
- a memory connected between the first and second physical-layer interfaces, for temporarily storing data to be transferred between the first and second physical-layer interfaces (Treadaway, col.3, l.53-55); and
- a media converter controller determining whether a received block of data stored in the memory includes the identification data of its own at a predetermined position of the received block of data; when it is determined that the received block of data stored in the memory includes the identification data, generating a response block of data corresponding to the received block of data (Treadaway, col. 21, l. 14-24); and
- transmitting the response block of data from a corresponding one of the first and second physical-layer interfaces back to a source that has transmitted the received block of data (Treadaway, col.16, l.52-58), and the test manager comprises:
 - an interface to a network manager (Treadaway, col. 7, l.64-67); and
 - a test manager controller transmitting a block of data to each of the media converters, the block of data having identification data of the media converter written in a predetermined position of the block of data (Treadaway, col.10, l.5-20);
 - determining whether a response block of data is received from a corresponding media converter within a predetermined time period (Treadaway, col. 23, l.4-5); and
 - determining a location of a failure based on a determination result (Treadaway, col. 27, l.57-64).

19. Regarding claim 28, Treadaway further discloses the system according to claim 26, wherein each of the first and second physical-layer interfaces supports MII (Media Independent Interface) conforming to IEEE802.3 standards (Treadaway,

col.11, l.15-17).

20. Regarding claim 29, Treadaway further discloses the system according to claim 28, wherein the media converter controller accesses another one of the first and second physical-layer interfaces to acquire link information from the other physical-layer interface when it is determined that the received block of data stored in the memory includes the identification data of its own and generates the response block of data corresponding to the link information (Treadaway, col. 17, l.28-35).
21. Regarding claim 30, Treadaway further discloses the system according to claim 28, wherein the test manager controller disables the missing link state when a test is started and forces a corresponding physical-layer interface into transmittable state to transmit the block of data to the link (Treadaway, col. 7, l.33-35).
22. Claims 31-32 have similar limitation as claim 8-10. Therefore, claims 21-25 are rejected under Treadaway for the same reason set forth in the rejection of claims 8-10.
23. Claims 33-34 have similar limitation as claim 1, and 26. Therefore, claims 33-34 are rejected under Treadaway for the same reason set forth in the rejection of claims 1, and 26.

Conclusion

The prior art made of record and not relied upon is considered pertinent to application's disclosure.

- Crayford Ian (Patent No. 5673254) Enhancements to 802.3 Media Access Control and Associated Signaling Schemes for Ethernet Switching
- Hoang Thao (Patent No. 6516352) Adaptive Interface Controller that Can Operate with Segments of Different Protocol and Transmission Rates in A single Integrated Device
- Booth et al., (Patent No. 6516352) Network Interface System and Method for Dynamically Switching Between Different Physical Layer Devices
- Mills et al., (Patent No. 6748495) Method and Apparatus for Supporting Physical Layer Link Suspend Operation Between Network Nodes
- IEEE – Nyu et al., Fast Ethernet System with High-speed Plastic Optical Fiber Data Link, IEEE Optical Fiber Communications, 1996, OFC '96, Feb 25 – March 1, 1996, pp. 221-223.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelvin Lin whose telephone number is 703-605-1726.

The examiner can normally be reached on Flexible 4/9/5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey can be reached on 703-305-9705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kyl
9/23/04


JACK B. HARVEY
SUPERVISORY PATENT EXAMINER